

10/572796

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Steinkuhler, et al.

IAP20 Rec'd PCT/PTO 21 MAR 2006

Serial No. To Be Assigned

Art Unit: \_\_\_\_\_

Filed:

Examiner: \_\_\_\_\_

For: SYNTHETIC HEPARANASE MOLECULES AND USES  
THEREOFCommissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR 1.97

Sir:

1. In compliance with 37 C.F.R. 1.97, submitted on the attached form herewith is a list of patents, publications or other information which are requested to be made of record in this application. This Information Disclosure Statement is not an admission that any patent, publication or other information referred to herein is "prior art" for this invention. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b).
2. In accordance with 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.
3. Applicants respectfully request that the Examiner initial the attached form after reviewing the pertinence of each reference.
4. Pursuant to 37 C.F.R. 1.98 (a)(2)(ii), copies of each cited U.S. patent and each U.S. patent application publication are not enclosed herewith.

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## INFORMATION DISCLOSURE STATEMENT

10/572796

IAP20 Rec'd PCT/PTO 21 MAR 2006

5. Pursuant to 37 C.F.R. 1.98(d), copies of references listed on the attached form that were submitted to or cited by the Office in a related application upon which the instant application relies for an earlier filing date under 35 U.S.C. 120 are not enclosed. Related application(s) in which references were submitted to or cited by the Office are as follows:

RELATED APPLICATION		
U. S. SERIAL NUMBER	FILING DATE	MERCK CASE

If this is inconvenient, additional copies will be submitted upon request.

6. In accordance with 37 C.F.R. 1.97, (check one)

- ☒ the attached information is filed within three months of the filing date of the captioned case.
- ☐ the attached information is filed more than three months after the filing date but prior to the mailing of a first Office Action on the merits.
- ☐ the attached information is filed before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
- ☐ the attached information is being filed more than three months after the filing date and after the mailing of a first Office Action on the merits, but before the mailing date of a Final Action, Notice of Allowance, or an action that otherwise closes prosecution in the application. The enclosed authorization is therefore given to charge Deposit Account No. 13-2755 for the fee required under 37 C.F.R. 1.17(p).
- ☐ each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
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- ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated under 37 C.F.R. 1.56(c) more than three months prior to the filing of this Statement.

Respectfully submitted,

By: Alysia A. Finnegan

Attorney \_\_\_\_\_ For Applicant(s)

Reg. No. 48,878

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Date: March 21, 2006



Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE</b>  <b>STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>COMPLETE IF KNOWN</b>		
			Application Number	30/572796	
			Filing Date		
			First Named Inventor	Steinkuhler, et al.	
			Group Art Unit	21 MAR 2006	
			Examiner Name		
Sheet	2	of	2	Attorney Docket Number	ITR0060YP

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
		Chang, et al., "Differential ability of heparan sulfate proteoglycans to assemble the fibroblast growth factor receptor complex in situ", FASEB Journal, Vol. 14, January 2000, pp. 137-144.
		Esko, et al., "Molecular diversity of heparan sulfate", The J. of Clin. Invest., Vol. 103, No. 2, July 2001, pp. 169-173.
		Fairbanks, et al., "Processing of the Human Heparanase Precursor and Evidence That the Active Enzyme Is a Heterodimer", J. of Biol. Chem., Vol. 274, No. 42, October 15, 1999, pp. 29587-29590.
		Garcia-Campayo, et al., "Novel recombinant gonadotropins", TRENDS in Endocrin. & Metab., Vol. 12, No. 2, March 2001, pp. 72-77.
		Hulett, et al., Cloning of mammalian heparanase, an important enzyme in tumor invasion and metastasis", Nature Medicine, Vol. 5, No. 7, July 1999, pp. 803-809.
		Hulett, et al., "Identification of Active-Site Residues of the Pro-Metastatic Endoglycosidase Heparanase", Biochemistry, Vol. 39, 2000, pp. 15659-15667.
		Levy-Adam, et al., "Heterodimer formation is essential for heparanase enzymatic activity", Biochem. and Biophys. Res. Comm., Vol. 308, 2003, pp. 885-891.
		McKenzie, et al., "Biochemical characterization of the active heterodimer form of human heparanase (Hpa1) protein expressed in insect cells", Biochem. J., Vol. 373, 2003, pp. 423-435.
		Nardella, et al., "Mechanism of Activation of Human Heparanase Investigated by Protein Engineering", Biochemistry, Vol. 43, 2004, pp. 1862-1873.
		Parks, et al., "Release of Proteins and Peptides from Fusion Proteins Using a Recombinant Plant Virus Proteinase", Anal. Biochem., Vol. 216, 1994, pp. 413-417.
		Toyoshima, et al., "Human Heparanase", J. of Biol. Chem., Vol. 274, No. 34, August 20, 1999, pp. 24153-24160.
		Turnbull, et al., "Heparan sulfate: decoding a dynamic multifunctional cell regulator", TRENDS in Cell Biol., Vol. 11, No. 2, February 2001, pp. 75-82.
		Vlodavsky, et al., "Mammalian heparanase: Gene cloning, expression and function in tumor progression and metastasis", Nature Medicine, Vol. 5, No. 7, July 1999, pp. 793-802.
		Vlodavsky, et al., "Mammalian heparanase: involvement in cancer metastasis, angiogenesis and normal development", Cancer Biol., Vol. 12, 2002, pp. 121-129.

Examiner Signature	Date Considered
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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